Understanding Self-hosted Build Agents

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Good and Bad Reasons for Self-hosting

1. Agent latency

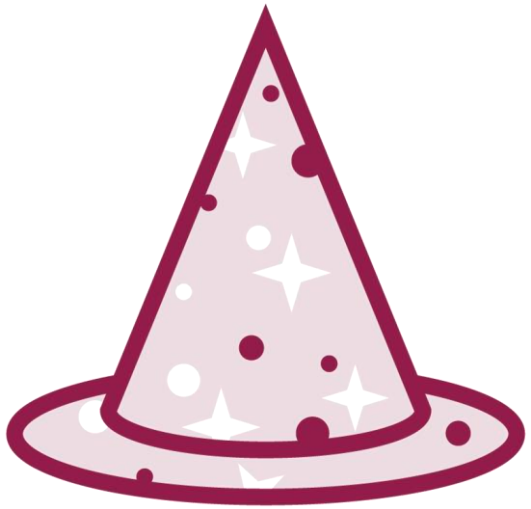
- Availability is a key factor
- Azure was having troubles while I was recording
- Even through I'd purchased parallel agents, Azure couldn't provision them

2. Complex dependencies

- Like we talked about
- Some of them were developer installs from the late nineties
- No Nuget package is coming

Good Witch, Bad Witch

Latency is a good reason to self-host



Poor dependency management is not a good reason

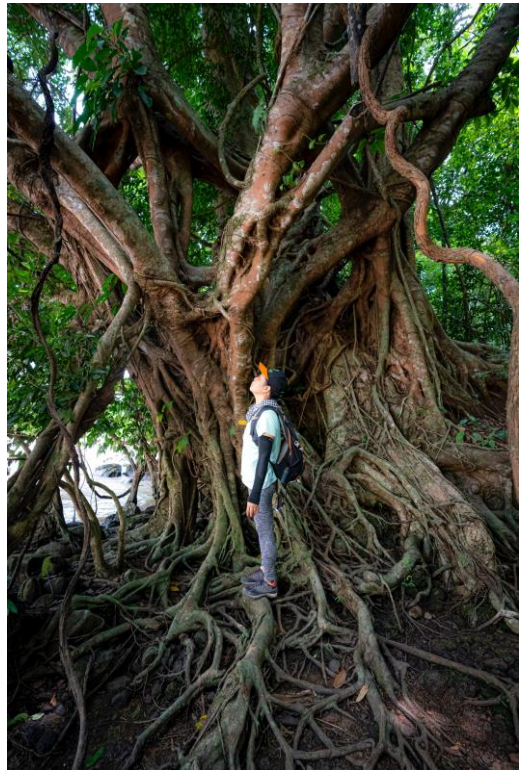
Unstructured Dependencies Are a Bad Thing

Builds should minimize their ties to the build environment

Because that dependency tends not to be portable

And is usually stuck in someone's head

Dealing with Complex Dependencies



1. Dependency packaging

- You can create your own packages of WHATEVER
- And often, you're the only person who will do it

2. A Dependency-Equipped Container

- A bit of a hack
- Install your dependencies to the container and then commit the image

Containerized Agents

Run the

https://docs.microsoft.com/en-us/azure/devops/pipelines/agents/docker

d

Bridging the Gap between Self and Cloud-hosting

Once everything is packaged up right...

You need to factor your builds for parallelism

Then it all comes down to economics

$40

$15

$25

Understanding Scale Set Agents

Once you've decided to self-host...

Consider using a VM scale set for your agents

Using Scale Set Agents

1. Specify a base VM image
2. Create an agent pool
3. Specify the type as Scale Set

Designing a Hybrid Build

Another reason to self-host

You've got stuff you want kept inside the firewall

Like Jenkins builds

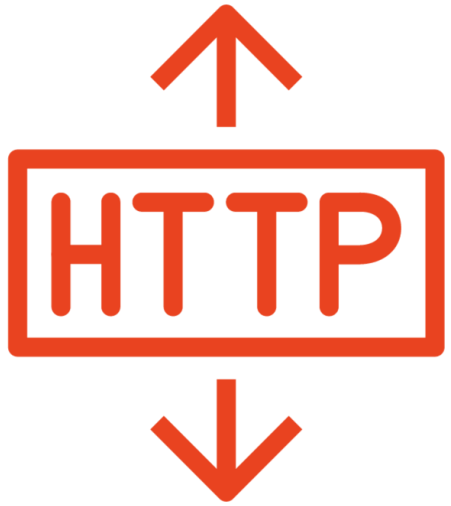
A complete cloud migration may not be possible

So we need to think in terms of hybrid pipelines

Using REST Calls to Connect Hybrid Resources

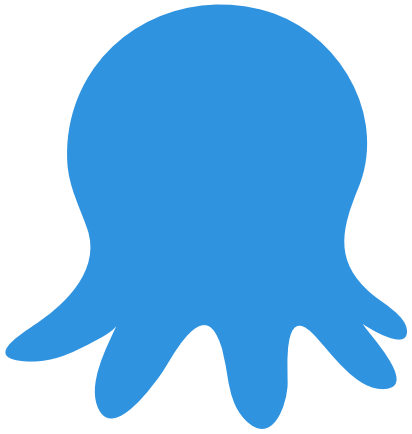
A build triggered in Azure

Which invokes the Jenkins REST API



It can poll the status of the build via the API until completion

Deploying to Somewhere Other Than Azure



Maybe you're tracking work items, builds and version control in Azure

But deploying elsewhere

Connect your builds to external tools

- Via script
- Via Azure Marketplace extensions

Connect to an Octopus instance with a service connection and extension

THANK YOU FOR WATCHING!!!